

**Title** – Information Creates Relative Bargaining Power in Vendor Negotiations

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## **Abstract**

**Purpose** – This paper examines how libraries can create relative bargaining power and presents a methodology for analyzing collections and preparing for negotiations.

**Design/Methodology/Approach** – A brief literature review of the current state of collection budgets and electronic resource prices is presented, before a methodology based on business analysis frameworks and techniques is proposed.

**Findings** – Electronic resource subscription prices are increasing at a rate significantly higher than inflation, while collection budgets grow slowly, remain stagnant or decrease. Academic libraries have the ability to counteract this trend by creating relative bargaining power through organizational efforts that take advantage of size and concentration (e.g. consortia), vertical integration through practices such as library publishing and open access, and through individual efforts using information. This paper proposes metrics and methodologies that librarians can use to analyze their collections, set negotiation priorities, and prepare for individual resource negotiations to create relative bargaining power.

**Practical Implications** – The proposed methodology enables librarians and buyers of information resources to harness the information available about their electronic resource collections to better position themselves when entering negotiations with vendors.

**Originality/Value** – This paper presents metrics, some not commonly used (i.e. average annual price increase/decrease) that aid in understanding price sensitivity. Pareto analysis has been traditionally used to analyze usage, but this paper suggests using it in relation to costs and budgets for setting negotiation priorities.

**Keywords** – academic libraries, collection management, vendor negotiations

**Paper type** – Viewpoint

Electronic resource (e-resource) subscription prices are increasing at a rate that is considerably higher than collection budgets within academic libraries. In order to manage these increases academic librarians continually need to make tough choices for collections, services, and programs. These increases are unsustainable and academic libraries need to work to bring about change. The first strategic step requires conducting an industry analysis to understand the forces impacting libraries' ability to fulfill their key mission to support research and teaching through providing information. Porter's Five Forces of Competition can be used as a framework to understand the industry of academic libraries. It provides insight on the buyer/supplier dynamic between libraries and e-resource vendors revealing potential avenues that create relative bargaining power at the academic library community, institutional, and individual librarian levels. This paper suggests strategies that will help shift the balance of power back to academic libraries. Considering Porter's Five Forces, a methodology is proposed that individual subject liaisons can use as they work with acquisitions librarians to analyze their own collections and negotiate sustainable pricing while supporting larger efforts.

Porter's Five Forces of Competition is a framework that explains the major forces that influence the ability of an organization to compete for profits (Porter, 2008). In a profit-driven organization, the forces that affect competition are: the threat of new entrants, the threat of substitute products or services, supplier bargaining power, buyer bargaining power, and rivalry among existing competitors. While academic libraries are mission, not profit, driven, this framework can be modified for non-profits and the public sector to assist in planning and strategy (Martinez and Wolverton, 2009; Schwenger, Straub, and Borzillo, 2014; Vining, 2011). Martinez and Wolverton (2009) suggests that in public institutions, government is a sixth force when they adapt the model to apply to higher education. This differs from Porter's (2008) viewpoint that government is a factor not a force that affects competition in profit-driven organizations.

When conducting industry analysis for planning purposes it is important to not look at any single force independently before making strategic decisions, as the forces are interdependent. This paper will dive deeply into the force of supplier power but will also touch on some of the other forces affecting academic libraries as it relates to understanding the supplier/buyer dynamic between e-resource vendors and academic libraries. Price sensitivity and relative bargaining power, the key factors that help explain the supplier/buyer power dynamic, will also be explored.

### **Library budgetary pressures**

Library budgets at private and public universities in the United States are shrinking as a proportion of university budgets, dropping from a peak of 3.7% in 1982 to 1.8% in 2011 according to an Association of Research Libraries (ARL) survey (2013). However, during that

same period, university budgets have grown significantly, which has allowed library budgets to grow faster than the rate of US inflation, but not at a rate as high as the increases seen in e-resource pricing (Odlyzko, 2015). Regardless of this past trend, university budgets will likely not be able to continue to grow at current rates due to budget constraints particularly around tuition. In 2015, tuition and fees contributed 22.2% of the operating revenue of public 4-year institutions, and 34.9% of the total revenue at 4-year private nonprofit institutions (Almanac, 2017). According to data collected by The College Board (2016), tuition increases are slowing and public 4-year universities had the lowest increases since the 1970s in the 2014-15, 2015-16, and 2016-17 academic years. After last few decades of significant tuition growth, the public has a watchful eye on the cost of higher education, and tuition increases have become politically unpopular. Private universities give back almost half of tuition in grants and scholarships; the tuition discount rate climbed to 48.6% for incoming-freshman in 2015-16 (Seltzer, 2016). Slow tuition growth will force university administration to reign in budget growth increasing the pressure to cut expenses. The downward trend in library budgets as a proportion of total university spending is likely to continue.

Federal and state funding is also at risk in the current political climate. Federal grant funding for students is in question, which, if cut, will likely reduce future enrollment. On an institutional level, university libraries may have less access to federal grant programs and other funding through the Institute of Museum and Library Services (IMLS) and the Library Services and Technology Act (LSTA), whose funding is threatened regularly as the US Congress attempts to balance the budget. State governments are experiencing similar pressures to reign in government spending, affecting state appropriations, which averaged 17.8% of the nonoperating revenue for public 4-year universities in 2015 (Almanac, 2017).

Academic library collection budgets are growing at best slowly, but many are flat or decreasing. According to data collected by the ARL (2015) from its 115 member institutions, the compound annual growth rate (CAGR) of collections budgets from 2010 to 2015 is 3.0%, while salaries and wages of professional staff and total library expenditures have CAGRs of 1.9% and 1.6%, respectively. Serial acquisitions is driving the higher increase in collection budgets, forcing institutions to cut in other areas, such as monographs and programming.

Circling back to Porter's Five Forces, these increased budgetary pressures coupled with the cooperative nature of the institutions minimizes the threat of new entrants for academic libraries. However, understanding why the threat of new entrants is not a powerful force provides context for why libraries need to work strategically to mitigate more powerful forces such as supplier power.

### **Price sensitivity to price increases**

Porter (2008) defines price sensitivity as the extent to which buyers are sensitive to price increases. Four factors influence price sensitivity: proportion of total cost, the level of differentiation between products, the importance of a product/service to the buyer for offering a quality service or product to their own customers, and the level of competition between end users (Porter, 2008). **Table 1** provides further explanation including how these factors pertain to academic libraries. Understanding these factors can help librarians find options when negotiating as well as determine the impact on a collection if a price increase is accepted.

**Table 1: Factors of price sensitivity in academic libraries**

<b>Factors of price sensitivity</b>	<b>Application within academic libraries</b>
Proportion of total cost.	Libraries are more sensitive to price changes in databases that have a larger proportion of the budget.
The level of differentiation between products.	Libraries are less sensitive to unique products where there are few substitutes.
The importance of product/service to the buyer for offering a quality service or product to their own customers.	Libraries are less price sensitive for resources considered critical for supporting research and teaching goals for their institution.
The level of competition among end users (customers).	Libraries are more sensitive as competition increases for the attention of their customers, which should force publishers to offer price reductions. E.g. Wikipedia, scholarly repositories, Google are all options that customers can use to find information that are alternatives to subscription resources.

While library collections budgets are threatened, they are also facing price increases for subscription resources at a rate higher than U.S. inflation (consumer price index) (Odlyzko, 2015). The steep increase in prices paired with slowly growing collections budgets mean academic librarians must make tough decisions to cut resources at least every few years. Unless libraries work to address this unsustainable trend, over time libraries will be able to offer fewer resources that are useful for their user populations.

Odlyzko (2015) makes an argument that utility of resources has increased because of “big deals” with major publishers. He states that cost per serial has decreased due to the increased volume of serials available to users, so users have increased access to the number of journals published. “Big deals” practice a bundling price strategy that provide access to desired journals as well as the rest of a publisher’s collection of other journals at a slight price increase; the initial deals were 10-15% above the current expenditure for desired journals (Bergstrom *et al*, 2014). However, many of these serials are not scholarly (i.e., lacking a peer review process) and/or have very limited impact. The increasing expense of these “big deals” ties up a larger portion of

collection budgets, which makes it difficult to fund smaller publishers and non-journal oriented data and information resources. While cost per serial goes down with these “big deals,” the collections may become less useful for meeting patrons’ research and teaching goals within an individual institution. It also creates a self-perpetuating cycle that promotes industry consolidation, sustaining the oligopoly that exists in scholarly publishing (Larivière *et al*, 2015).

Historically, academic libraries have behaved in a manner that indicates price insensitivity to serial purchases by accepting high price increases despite slow growing and stagnant budgets. This insensitivity is driven by the monopolistic nature of scholarly publishing, where information needed for research and teaching is only available through an individual journal. Academic libraries have managed these price increases by cutting other portions of the library budget. Odlyzko (2015) argues that this has driven libraries to become more efficient. However, these cuts may also be degrading other aspects of the collection such as monograph purchases, as well as limiting available services that libraries could offer (Walters, 2008). Absorbing these price increases is forcing libraries to cut programs, cancel resources, eliminate positions, and freeze wages.

### **The supplier power of e-resource vendors**

The scholarly publishing industry is an oligopoly, enabling them to push price increases on academic libraries. In 2013, one of five publishers (Reed-Elsevier, Springer, Wiley-Blackwell, Taylor & Francis, and Sage Publications) published over 50% of the articles that could be located on Thomson Reuters Web of Science (WoS) in the Natural and Medical Sciences or the Social Sciences and Humanities (Larivière *et al*, 2015). These large publishers,

often involved in “big deals” with academic institutions, have estimated profit margins between 20-30% (Dorsey *et al*, 2011; Larivière *et al*, 2015; Van Noorden, 201; Wenzler, 2017).

Due to the monopolistic nature of scholarly journal articles, e-resource vendors have been able to lock-in universities to their resources. Academic libraries are particularly vulnerable to what Shapiro and Varian (1999) describe as a brand-specific training lock-in strategy, which is supported by the importance many scholars place on journal impact factor. Scholars want quick access to the top journals, which creates pushback when cancelling resources and asking scholars to use interlibrary loan as an alternative.

This creates an environment where e-resource vendors can practice price discrimination, which is where vendors sell products at different prices to different buyers to maximize profits. Vendors will adjust offered prices by the size of the institution, number of seats offered, and the specific resources desired in order to offer customized pricing. According to Shapiro and Varian (1999) differentiating the product and the price is a strategy to be used to reduce the likelihood of close substitutes. They also suggest that this strategy enables vendors to maximize profits if they can determine how much buyers are willing to pay.

### **A note on the threat of substitutes**

A substitute product or service performs a similar function as the industry’s product or service (Porter, 2008). The availability of information through the internet via search engines and social media is dramatically changing and is increasing the threat of substitutes for both libraries and e-resource vendors. Shapiro and Varian (1999) describe how the Encyclopedia Britannica was replaced by digital encyclopedic reference such as Encarta in the 1990s significantly changing this portion of the information market. The market for quick-reference is changing



once again through the advent of Wikipedia. Open Access (OA) has a similar potential to shift the dynamic within the scholarly publishing industry.

### **Libraries can create relative bargaining power**

According to Porter (2008), three factors influence relative bargaining power: size and concentration of buyers relative to suppliers, the ability to integrate vertically, and the use of information. Individual libraries acting independently from one another to negotiate agreements with publishers create a customer base with low customer concentration, placing individual institutions in a poor bargaining position. Customer concentration refers to the distribution of revenue across the number of customers, so the lower the number of customers the higher the concentration, resulting in improved bargaining power. Collectively, libraries can improve their concentration through consortia purchasing. It should be noted that consortia purchasing can be difficult to accomplish due to its nature – getting all the individual organizations to agree to collective terms. It also locks-in institutions to the agreement making it difficult to exit the deal, and if one institution does want out, the agreement may fall apart. As a strategy, factoring in these pitfalls, consortia purchasing is simply not enough to change the trajectory of e-resource prices. Wenzler (2017) argues that the library community needs to act collectively and determine ways to “consciously coordinate” the management of the scholarly record including how “big deals” are negotiated and how resources are priced beyond consortia, a difficult task.

A second strategy that can help address size and concentration is through forming internal partnerships with other organizations within a university. Rather than individual units purchasing access to a resource independently, together multiple units may be able negotiate a

better agreement, since suppliers will not want to risk losing access to all units of the university.

Examples of internal partnerships include:

- The law school library sharing a subscription with the university general counsel,
- University hospitals sharing resources with the medical library, and
- The business library and the technology transfer office subscribing to market research databases.

Internal partnerships may be a way to split costs and avoid double paying for access, as well as create a more powerful position when approaching a vendor negotiation. When entering these partnerships, it is important to outline the objectives of the partnership clearly. Partnerships should specify the parameters of the agreement in order to build trust, follow university policy, and balance the demands of competing institutional interests. When negotiating internal partnerships with vendors, the contract should explicitly state the access granted to the library as well as the institutional partner in order to avoid future conflicts, such as the situation facing Louisiana State University, who is suing Elsevier over breach of contract after access was cut off to the Veterinary School Library (Straumsheim, 2017).

In addition to increasing bargaining power through size and concentration, libraries can also focus on vertical integration. Vertical integration happens when a buying organization decides to create internal processes that were purchased previously through a supplier. Library publishing is one example of vertical integration. The Library Publishing Coalition provides an annual snapshot of library publishing activities through The Library Publishing Directory (<https://librarypublishing.org/resources/#directory>). Institutional repositories providing open access (OA) to scholarly work and open educational resources are examples of cooperative

vertical integration. For example, libraries are working to increase the availability of access to resources through initiatives such as SPARC (<https://sparcopen.org/>) and the Budapest Open Access Initiative (<http://www.budapestopenaccessinitiative.org/>). As the OA movement grows, it has the potential to create increased competition among subscription vendors, presenting opportunities to negotiate for lower prices. However, in order for this movement to grow, budget dollars must shift to support these activities, which will create additional pressure on traditional collections. While this additional pressure is uncomfortable, it should not be unwelcomed by librarians managing collections. As librarians manage their purchases, they should consider how the decisions they make in their collections could support the values of OA. Subject liaisons and acquisitions librarians should work as allies for their institution's scholarly communication strategy, as opposed to working in separate silos (Finney, 2016). As mentioned earlier in this analysis, OA through institutional and disciplinary repositories that provide access to pre-print or post-print scholarly articles, could shift how the scholarly publishing industry operates resulting in improved pricing and sustainable budgets for libraries.

Vertical integration and size/concentration are factors influenced by libraries, their institutions, and library networks. These factors require larger organizational efforts. In contrast, individual librarians can apply their efforts toward the third factor, the use of information, to create bargaining power. Through collection analysis and negotiation planning, subject liaisons and acquisitions librarians can work together to optimize their efforts in order to provide the best resources for their patrons, while being fiscally responsive and supportive of the values of OA.

### **Understand buyer/supplier power through collection analysis**

Collection analysis provides the ability to evaluate a collection at a holistic level as well as information that is critical for understanding the buyer/supplier power dynamic for individual resources, which is necessary in order to create relative bargaining power. This article suggests six metrics librarians can use to understand past and present price sensitivity, summarized in **Table 2**.

The first metric, *average annual increase/decrease of price*, reveals the history of price increases. This article suggests looking at averages at 3 and 5 years in order to understand if there has been a marked increase more recently, as well as provide insight on newer subscriptions. The reason to calculate an average annual increase over a specific set period is to create a price change measurement that is comparable across vendors who may have different price increase patterns. Some vendors raise prices a bit at a time on an annual basis, while others will remain flat for a few years then request a significant price jump. By averaging the annual increase/decrease over a set period, the price change between different resources becomes commensurable, all other things being equal. When using this metric it is useful to note when significant changes have occurred within the resource subscription such as the addition and/or

**Table 2: Collection analysis metrics to understand price sensitivity.**

<b>Metric</b>	<b>Price sensitivity factor</b>	<b>Data needed</b>	<b>Type of data</b>
Average annual increase/decrease in price	Indicates overall price sensitivity over a set period. Higher average price increases are indicative of less sensitivity.	<ul style="list-style-type: none"> <li>• Price history going back at least 6 years (Newer purchases 4 years).</li> <li>• Calculate the 3 and 5 year average annual price change.</li> </ul>	Quantitative
Percentage of spend	Proportion of total costs.	<ul style="list-style-type: none"> <li>• Budget numbers at collection and/or library level.</li> <li>• Most recent pricing.</li> </ul>	Quantitative
Cost per use	The importance of a product/service to the buyer.	<ul style="list-style-type: none"> <li>• Usage statistics from prior year.</li> <li>• Pricing for period of usage statistics.</li> <li>• Historical usage and cost per use for trends.</li> </ul>	Quantitative
Cost per citation	The importance of a product/service to the buyer.	<ul style="list-style-type: none"> <li>• Citations from published work of scholars at institution.</li> <li>• Pricing for period of citation study.</li> </ul>	Quantitative
Core resource	The importance of a product/service to the buyer.	<ul style="list-style-type: none"> <li>• Faculty feedback.</li> <li>• Course syllabi and assignments.</li> <li>• Collection benchmarking against peer institutions.</li> </ul>	Qualitative
Uniqueness to the collection	The importance of a product/service to the buyer.	<ul style="list-style-type: none"> <li>• Content provided by a resource. Document overlaps with other resources, as well as exclusive features.</li> </ul>	Qualitative
Availability of substitutes	The level of differentiation between products. The level of competition among end users.	<ul style="list-style-type: none"> <li>• Available competitive offerings including open access and on demand services.</li> </ul>	Qualitative

subtraction of content or user licenses, which may have driven the price change. This

recommendation is supported by guidelines provided by Dygert and Barratt (2016), who suggest

examining library budgets over the past 3 to 5 years when preparing for negotiations. Reviewing the average annual increase/decrease of price against the budget illuminates the impact of price changes.

The second metric, *percentage of spend*, allows librarians to understand how significantly a resource affects their budget by determining the proportion of their total costs for collection materials at the discipline and/or library level. Price changes for a more expensive resource will have greater impact overall. This metric assists librarians in setting priorities in regards to which resources to focus on first.

The third metric, *cost per use*, helps librarians understand the importance of that resource for the library in order to provide quality services, as well as the value provided by offering a resource. Cost per use provides insight as to whether a resource is an efficient use of budget funds by comparing against other resources within the collection. Librarians need to use judgement when gathering and using cost per use data since usage statistics are not measured and communicated in a uniform manner (Huffine, 2015). Cost per use and overall usage data can provide librarians insight into trends in resource usage, which is helpful when negotiating prices and content with publishers (Emrani *et al*, 2010). However, do not evaluate cost per use independently; this metric should be considered with the recommended qualitative measures.

The fourth metric is *cost per citation*, librarians can analyze how often researchers within their institution cite from journals within their collection. This analysis is more difficult to collect but worth exploring, especially for high-priced scholarly journals. APIs offered through indexing databases such as Web of Science is improving the ability to do this type of analysis.

The first four metrics are the easiest to gather due to their quantitative nature. However, the following three recommended qualitative metrics are critical for understanding the collection holistically, setting negotiation priorities, and devising negotiation plans for individual resources.

Determining whether a resource is a *core resource* for research and/or teaching at an institution is the first qualitative metric. Quantitative data on usage paired with qualitative feedback gathered from faculty, course syllabi, assignments, and research consultations can help librarians determine whether a resource falls within this category. Collection benchmarking with peer institutions may also provide guidance. A second qualitative metric to consider is the *uniqueness of content to the collection*. These two qualitative metrics provide context that quantitative metrics cannot provide, clarifying the importance of a resource for providing service to a library's unique patrons. The final qualitative metric is the *availability of substitutes*. This metric allows librarians to understand product differentiation and competitive offerings. Understanding this helps create options when planning for negotiations. While substitutes are a challenge in scholarly publishing, due to the monopolistic nature of academic journals, it may be an option for other types of e-resources offered by the library. When evaluating the availability of substitutes, librarians should consider resources and changes in service models including options such as open access, library publishing, and on-demand purchasing.

### **A method for setting negotiation priorities**

Librarians, whether they are subject liaisons or acquisitions professionals, are taking on additional duties as the profession evolves. Developing a plan to negotiate all resources within a given year is likely not the optimal way to allocate time between competing priorities. Therefore, librarians need to adopt a method to conduct a holistic collection analysis that enables setting

priorities. This paper proposes a methodology adapted from business analysis techniques commonly used to either decrease supplier costs or increase overall customer profitability. This methodology, proposed below, determines which negotiations would provide the highest impact when managing costs within a collection by examining average price increase as well as the proportion a resource contributes to the collection spend. The collection spend is the total amount of dollars spent to maintain a collection within a given year. Spend can be determined at the discipline, budget line, and/or institutional levels.

*Step One: Set a threshold for average annual price increases.*

Thresholds should be set between the current rate of inflation (consumer price index <https://www.bls.gov/cpi/>) and 10%. Consider whether the library is facing budget cuts or is trying to maintain its current collection when setting thresholds. The more drastic the cuts, the lower librarians should set the threshold. It may also be helpful to understand the total average annual increase/decrease in costs for a collection over a 5-year period. When calculating the total average annual increase/decrease for a collection only use comparable databases—do not include databases that were cut, added, or had some other material change. Once the threshold is determined, flag resources with average annual price increases above the threshold for further review. **Table 3** provides an example of this analysis. Using the price history of the past six years it calculates the average annual price increase over 5-year and 3-year periods. Flag resources that are above the set threshold. In general, use the 5-year average, but defer to the 3-year average when data is missing or the resource has steep price increases.



**Table 3: Example of flagging resources for being above the price increase threshold**

The 5-year Average Annual Increase for this collection is 4.9%

Consumer Price Index June 2017 (Bureau of Labor Statistics): 1.6%

Average Annual Increase Threshold is set at 5%

				Price history					
Title	5-YR average inc/dec	3-YR average inc/dec	Above threshold flag	2015/ 2016	2014/ 2015	2013/ 2014	2012/ 2013	2011/ 2012	2010/ 2011
Database A	3.8%	4.2%		\$31,500	\$31,000	\$30,000	\$28,000	\$27,000	\$26,500
Database B	2.2%	1.8%		20,000	20,000	19,500	19,000	19,000	18,000
Database C	3.0%	5.0%		8,000	7,750	7,250	6,950	6,950	6,950
Serial D	6.7%	8.3%	Y	1,000	950	875	800	750	750
Database E	2.5%	3.0%		1,800	1,800	1,650	1,650	1,650	1,600
Database F	2.2%	2.9%		5,000	4,800	4,800	4,600	4,600	4,500
Serial G	4.0%	4.2%		900	850	850	800	800	750
Database H	2.5%	4.2%		4,500	4,500	4,500	4,000	4,000	4,000
Serial I	5.0%	5.0%		5,000	4,850	4,650	4,350	4,000	4,000
Database J	7.9%	8.7%	Y	26,500	24,000	23,000	21,000	20,000	19,000
Database K	6.1%	3.7%	Y	3,000	2,900	2,800	2,700	2,500	2,300
Database L	6.4%	7.4%	Y	16,500	15,000	15,000	13,500	12,500	12,500
Database M	7.5%	4.3%	Y	22,000	21,500	20,500	19,500	18,500	16,000
<b>Total Spend</b>				<b>\$145,700</b>	<b>\$139,900</b>	<b>\$135,375</b>	<b>\$126,850</b>	<b>\$122,250</b>	<b>\$116,850</b>

*Step 2: Apply the 80/20 rule.*

The 80/20 rule, also known as the Pareto principle, is the law of the vital few. It refers to the idea that a few resources have the most significant impact. In collection analysis, it has been used to evaluate a collection based on usage (Nisonger, 2008). This article, however, proposes applying the principle to the cost of a resource and its proportion of the collection spend in order to set negotiation priorities. To conduct a Pareto analysis of a collection, sort resources in descending order based on cost. Now determine which resources make up the first 80% of the collection spend. Flag those resources that are part of that first 80% of the spend. The Pareto principle states that it will be approximately 20% of the count of resources. In practice, this may be off a bit (+/-10%). See **Table 4** for an example on applying the 80/20 rule to costs.

**Table 4: Applying the 80/20 rule to electronic resource costs**

Title	Annual spend 2015/2016	Cumulative spend	% Cumulative spend*	80% Spend flag
Database A	\$31,500	\$31,500	22%	Y
Database J	26,500	58,000	40%	Y
Database M	22,000	80,000	55%	Y
Database B	20,000	100,000	69%	Y
Database L	16,500	116,500	80%	Y
Database C	8,000	124,500	85%	
Database F	5,000	129,500	89%	
Serial I	5,000	134,500	92%	
Database H	4,500	139,000	95%	
Database K	3,000	142,000	97%	
Database E	1,800	143,800	99%	
Serial D	1,000	144,800	99%	
Serial G	900	145,700	100%	

\*Total spend is \$145,700

*Step 3: Determine resources above threshold and flagged by 80/20 rule.*

These resources should be the top priorities for negotiation. Using the example presented in **Table 3** and **Table 4**, the top priorities would be database J, databases L, and database M.

Once the top priorities have been tackled, move down the list prioritizing by proportion of spend and average annual price increase. A template, populated with formulas, is openly available for conducting this analysis (<http://hdl.handle.net/1805/12032>).

### **Planning a negotiation**

Negotiations have three phases: negotiation preparation, the negotiation, and coming to an agreement (Dygert and Barrett, 2016; Walton, 2005). Once priorities are determined, librarians can start preparing for individual negotiations, which should take the majority of the time in the negotiation process. Flowers (2003) provides a detailed outline of the negotiation preparation process for negotiating with library materials vendors. If adequate time is spent on

preparation, the actual negotiation and coming to an agreement will be much easier. When preparing for the negotiation it is important to outline objectives. In a survey conducted by Data-Planet for a conference in 2014, 72% of librarians indicated they did not have a documented set of objectives, and 60% of survey respondents were displeased with the results but renewed or purchased the resource (Gruenberg, 2014). When clear objectives are outlined for both sides of the negotiation, it allows principled negotiations to occur, as opposed to positional negotiations (Crawford, 2008; Dygert and Barrett, 2016). A negotiation is positional when the parties involved in the negotiation are more concerned with winning a key point at the risk of the relationship or are afraid of not being “friends.” In positional negotiations, libraries may fail to ask for what is needed (Crawford, 2008; Dygert and Barrett, 2016). The ultimate result is dissatisfaction on at least one side of the deal. Principled negotiations, in contrast, focus on the key interests of both parties to create a win-win scenario.

When preparing, consider the long-term future of the resource. According to Gruenberg (2014), the typical lifecycle of a subscription-based database product, where there are no major changes to the interface, is five to seven years. Vendors understand that librarians hesitate to cancel subscription databases, so when selling a product they project a regular cash flow over that period of time, even if the renewal process occurs annually (Gruenberg, 2014). This projection of cash flows over the life of the product also means that vendors would rather not lose a customer that they can renew. Fogden (2010) recommends that librarians consider when the last major change in the product interface occurred, as well as changes in content, such as additions, discontinuations, and content transitioning to OA. Librarians should insert clauses in their contracts in the event of a major change in content or a significant change in the suppliers’ business model as well as consider terms that price cap renewals (Fogden, 2010).

Plan to negotiate pricing in concert with other important terms of the licensing agreement such as the term, content provided, ability to deposit in scholarly repositories, and authorized use. During negotiation preparation for renewals, review the proposed licensing agreement as closely as a new agreement. It is important to understand the components of a licensing agreement including how licensor, licensee, and authorized users and use are defined (Crawford, 2008; Dygert and Barrett, 2016). Determine points of flexibility within the contract to use during the negotiation. De Jong (2009) suggests using a strategy of investigative negotiation by applying detective-style interviewing techniques once in the active negotiation phase to determine options to present. Librarians should determine if barriers exist for considered options (e.g. information technology, staffing) and gain approval for any negotiable points from key stakeholders within their institution prior to presenting options to the vendor during the negotiation (Fogden, 2010).

Before entering the negotiation phase, gather information on the current state of the vendor's business by reviewing annual reports, company research, and current news stories (Crawford, 2008). Find or estimate the vendor's profit margin and determine if there are any indications of financial or operational trouble. Determine how the vendor is positioned in the industry in regards to price and value. This knowledge provides insight on how the vendor may react to proposals and counterproposals during the negotiation.

Always keep in mind how vendors in the industry are attempting to create supplier power by benefiting from the monopolistic nature of the goods they are providing (e.g. scholarly journal articles), locking in users to specific resources, and by differentiating product offerings to mitigate the threat of substitutes.

**The path forward**

Performing Porter's Five Forces analysis provides insight that can lead to strategic action that can change the industry structure shifting buyer/supplier power. This analysis of academic libraries indicates that efforts such as supporting open access initiatives through funding and work efforts have the largest potential to shift the buyer/supplier dynamic. Lewis (2017) argues for the commitment of 2.5% of academic library budgets toward the creation of an open scholarly commons, an effort of cooperative vertical integration.

Individual academic librarians can support this commitment by negotiating with e-resource vendors. Librarians can harness information through effective use of quantitative and qualitative metrics. This provides a holistic view of a collection and allows for analysis of individual resources when planning negotiations. This also empowers librarians to set priorities as they manage their budgets providing a path forward for handling price increases with a slow growing, flat, or decreasing collection budget.

It is unsustainable to continue on the current trajectory where e-resource prices are increasing at a much higher rate than budgets. Eventually the money will run out. It is fiscally imperative to close the gap between budget and price changes, otherwise collections will suffer. The gap will only further widen considering the budget constraints facing universities and their libraries. Libraries need to negotiate for their resources based on the value they provide to their institution and push back against unsustainable price increases. They also need to explore operating models to ensure the continued support of the democratization of information, spend budget dollars on initiatives that promote OA, and consider when it is right to walk away from a deal. The first step is to create opportunity by critically examining alignment between institutional mission, the collections, and the budget, then prioritizing where to start negotiating

the change. Academic libraries need to work at the institutional level as well as search for opportunities in the academic library community to collaborate. Those efforts are part of a long game. However, at the grassroots, subject liaisons in concert with acquisitions librarians can support these initiatives by taking the opportunity to analyze their own collections, setting priorities, and negotiating better agreements with vendors.

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